

WHAT IS CLAIMED IS:

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1. An image recording apparatus, comprising:  
means for recording image data in a  
recording medium;  
means for obtaining information for  
10 determining a data amount reduction remaining force  
of image data recorded in the recording medium;  
means for selecting image data determined to  
have a large data amount reduction remaining force  
based on the information obtained by the means for  
15 obtaining information, with a priority; and  
means for performing a data amount reduction  
process against the image data selected by the means  
for selecting.

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2. The image recording apparatus, as claimed  
in claim 1,

wherein the image data are compressed by an image compression algorithm, and

image data having a large value of "an amount of present code" / "an amount of lossless code" are determined as image data having the large data amount reduction remaining force.

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3. The image recording apparatus, as claimed in claim 2,

wherein the amount of present code and the amount of the lossless code are amounts to which added visual weight is given for every sub-band.

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4. The image recording apparatus, as claimed in claim 1,

wherein the image data are compressed by an image compression algorithm in conformity to a bitplane coding scheme, and

image data having a large value of "an amount of present code / a total number of non-zero bitplanes" are determined as image data having the large data amount reduction remaining force.

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5. The image recording apparatus, as claimed  
10 in claim 1,

wherein the image data are compressed by a bitplane coding, and image data having a small value of "sum of truncated bitplanes or sum of truncated subbitplanes" are determined as image data having the  
15 large data amount reduction remaining force.

20 6. The image recording apparatus, as claimed in claim 5,

wherein the value of "sum of truncated bitplanes or sum of truncated subbitplanes" is determined considering the quantization step sizes.

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7. The image recording apparatus, as claimed  
in claim 5,

wherein the value of "sum of truncated  
bitplanes or sum of truncated subbitplanes" is  
5 determined considering the subband gains.

10 8. The image recording apparatus, as claimed  
in claim 5,

wherein the value of "sum of truncated  
bitplanes or sum of truncated subbitplanes" is  
determined considering the inverse component  
15 transform gains.

20 9. The image recording apparatus, as claimed  
in claim 5,

wherein the value of "sum of truncated  
bitplanes or sum of truncated subbitplanes" is  
determined considering the human visual character.  
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10. The image recording apparatus, as  
claimed in claim 1,

wherein image data having a small value of  
"sum of quantization errors" are determined as image  
5 data having the large data amount reduction remaining  
force.

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11. The image recording apparatus, as  
claimed in claim 10,

wherein the image data are compressed by a  
bitplane coding, and the value of "sum of  
15 quantization errors" is determined considering the  
truncated bitplanes or truncated subbitplanes and  
quantization step sizes.

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12. The image recording apparatus, as  
claimed in claim 10,

wherein the value of "sum of quantization  
25 errors" is determined considering the subband gains.

13. The image recording apparatus, as  
claimed in claim 10,

wherein the value of "sum of quantization  
errors" is determined considering the inverse  
5 component transform gains.

10 14. The image recording apparatus, as  
claimed in claim 10,

wherein the value of "sum of quantization  
errors" is determined considering the human visual  
character.

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15. The image recording apparatus, as  
20 claimed in claim 1,

wherein the image data are compressed by an  
image compression algorithm in conformity to a  
bitplane coding scheme, and

image data having small total number of non-zero bitplanes are determined as image data having the large data amount reduction remaining force.

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16. The image recording apparatus, as claimed in claim 1,

10            wherein image data having a large value of an image size are determined as image data having the large data amount reduction remaining force.

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17. The image recording apparatus, as claimed in claim 1,

             wherein image data at a high image quality  
20 mode are determined as image data having the large data amount reduction remaining force.

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18. The image recording apparatus, as  
claimed in claim 1,

wherein image data having small number of  
times of using an application of the data amount  
5 reduction process are determined as image data having  
the large data amount reduction remaining force.

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19. The image recording apparatus, as  
claimed in claim 1,

wherein it is determined that the data  
amount reduction remaining force of image data of a  
15 motion picture is greater than the data amount  
reduction remaining force of image data of a still  
picture.

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20. The image recording apparatus, as  
claimed in claim 2,

wherein in image data of motion pictures,  
25 image data of a motion picture having a larger



average value or maximum value of the "an amount of present code" / "an amount of lossless code" are determined as image data having the large data amount reduction remaining force.

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21. The image recording apparatus, as  
10 claimed in claim 1,

wherein it is determined that the data amount reduction remaining force of the image data having a designation of the data amount reduction process is greater than the data amount reduction  
15 remaining force of the image data not having the designation of the data amount reduction process.

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22. The image recording apparatus, as  
claimed in claim 1,

wherein a criterion for determining the data amount reduction remaining force can be selected from  
25 a plurality of the criteria.

23. The image recording apparatus, as  
claimed in claim 1,

wherein the data amount reduction process is  
performed on image data having a designation of the  
5 data amount reduction method by following the  
designated data amount designation method.

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24. The image recording apparatus, as  
claimed in claim 1, further comprising:

picture means for photographing a subject to  
be photographed and inputting the image data; and

15 image compression means for compressing the  
image data input by the picture means,

wherein the image data compressed by the  
image compression means are recorded in the recording  
medium.

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25. The image recording apparatus, as  
25 claimed in claim 24, further comprising:

means for detecting a lack of unused  
capacity of the recording medium, and

means for controlling the data amount  
reduction process for the recorded image data in a  
5 case where the lack of unused capacity is detected by  
the means for detecting.

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26. The image recording apparatus as claimed  
in claim 25, further comprising:

means for controlling the rising of a  
compression ratio of the image compression means when  
15 the lack of unused capacity of the recording medium  
is detected during a period in which the image data  
of a motion picture is input by the picture means.

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27. An image data selection method for  
selecting image data on which a data amount reduction  
process is performed from image data recorded in a  
25 recording medium, comprising the steps of:

a) obtaining information for determining a data amount reduction remaining force of image data; and

b) selecting image data determined to have a large data amount reduction remaining force, based on the information obtained in the step a), by a criterion, with a priority.

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28. The image data selection method as claimed in claim 27,

wherein the image data are compressed by an image compression algorithm, and

image data having a large value of "an amount of present code" / "an amount of lossless code" are determined as image data having the large data amount reduction remaining force.

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29. The image data selection method as claimed in claim 28,

wherein the amount of present code and the amount of the lossless code are amounts to which added visual weight is given for every sub-band.

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30. The image data selection method as claimed in claim 27,

10            wherein the image data are compressed by an image compression algorithm in conformity to a bitplane coding scheme, and

             image data having a large value of "an amount of present code / a total number of non-zero  
15 bitplanes" are determined as image data having the large data amount reduction remaining force.

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31. The image data selection method as claimed in claim 27,

             wherein the image data are compressed by an image compression algorithm in conformity to a  
25 bitplane coding scheme, and

image data having small total number of non-zero bitplane are determined as image data having the large data amount reduction remaining force.

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32. The image data selection method as claimed in claim 27,

10            wherein a criterion for determining the data amount reduction remaining force can be selected from a plurality of the criteria.

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33. A program for making a processor perform steps of an image data selection method for selecting image data to which a data amount reduction process  
20 is performed from image data recorded in a recording medium, comprising the steps of:

a) obtaining information for determining a data amount reduction remaining force of image data; and

b) selecting image data determined to have a large data amount reduction remaining force, based on the information obtained in the step a), by a criterion, with a priority.

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34. A recording medium capable of being read  
10 by a processor, comprising a program for making a processor perform steps of an image data selection method for selecting image data to which a data amount reduction process is performed from image data recorded in a recording medium, comprising the steps  
15 of:

a) obtaining information for determining a data amount reduction remaining force of image data; and

b) selecting image data determined to have a  
20 large data amount reduction remaining force, based on the information obtained in the step a), by a criterion, with a priority.

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35. The image recording apparatus as claimed  
in claim 1, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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36. The image recording apparatus as claimed  
10 in claim 2, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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37. The image recording apparatus as claimed  
in claim 3, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.



38. The image recording apparatus as claimed  
in claim 4, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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39. The image recording apparatus as claimed  
10 in claim 5, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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40. The image recording apparatus as claimed  
in claim 6, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

41. The image recording apparatus as claimed  
in claim 7, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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42. The image recording apparatus as claimed  
10 in claim 8, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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43. The image recording apparatus as claimed  
in claim 9, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

44. The image recording apparatus as claimed  
in claim 10, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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45. The image recording apparatus as claimed  
10 in claim 11, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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46. The image recording apparatus as claimed  
in claim 12, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

47. The image recording apparatus as claimed  
in claim 13, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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48. The image recording apparatus as claimed  
10 in claim 14, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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49. The image recording apparatus as claimed  
in claim 15, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

50. The image recording apparatus as claimed  
in claim 16, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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51. The image recording apparatus as claimed  
10 in claim 17, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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52. The image recording apparatus as claimed  
in claim 18, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

53. The image recording apparatus as claimed  
in claim 19, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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54. The image recording apparatus as claimed  
10 in claim 20, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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55. The image recording apparatus as claimed  
in claim 21, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

56. The image recording apparatus as claimed  
in claim 22, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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57. The image recording apparatus as claimed  
10 in claim 23, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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58. The image recording apparatus as claimed  
in claim 24, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

59. The image recording apparatus as claimed  
in claim 25, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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60. The image recording apparatus as claimed  
10 in claim 26, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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61. The image recording apparatus as claimed  
in claim 27, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.



62. The image recording apparatus as claimed  
in claim 28, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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63. The image recording apparatus as claimed  
10 in claim 29, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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64. The image recording apparatus as claimed  
in claim 30, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

65. The image recording apparatus as claimed  
in claim 31, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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66. The image recording apparatus as claimed  
10 in claim 32, wherein:

the coding way applied is one in conformity  
to JPEG2000.

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67. The image recording apparatus as claimed  
in claim 33, wherein:

the coding way applied is one in conformity  
20 to JPEG2000.

68. The image recording apparatus as claimed  
in claim 34, wherein:

the coding way applied is one in conformity  
to JPEG2000.